

Notice of Allowability

Application No.

10/812,174

Examiner

Richard L. Leung

Applicant(s)

ACHARYA ET AL.

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to communication filed 30 March 2004.
2. The allowed claim(s) is/are 1-9.
3. The drawings filed on 30 March 2004 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) hereto or 2) to Paper No./Mail Date _____.
(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 03-30-04
4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
 Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-9 are allowed.
2. The following is an examiner's statement of reasons for allowance: a search of the prior art did not reveal any clear suggestion or teaching of the claimed invention, and failed to demonstrate in any obvious combination all the limitations recited by independent claims 1 or 5. The prior art did not disclose a method for operating a cryocooler system comprising generating an oscillating gas at a frequency within the range 25 to 120 hertz using an electrically driven pressure wave generator, reducing the frequency using a frequency modulating mechanical resonator, and passing the lower frequency oscillating gas to a cryocooler for the generation of refrigeration. The prior art also did not disclose a cryocooler system comprising an electrically driven pressure wave generator, a frequency modulating mechanical resonator for receiving oscillating gas from the pressure wave generator, and a cryocooler for receiving oscillating gas from the frequency modulating mechanical resonator. Therefore all claims 1-9 are considered allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, all of which disclose various cryocooler arrangements.

US 5904046 (Kawano)

US 6434947 B2 (Zhu et al.)

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Leung whose telephone number is 571-272-4811. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise L. Esquivel can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Leung
Examiner
Art Unit 3744

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DENISE L. ESQUIVEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700